NIH NATIONAL CANCER INSTITUTE

RATIO BASED BIOMARKERS FOR THE PREDICTION OF CANCER SURVIVAL

SUMMARY

The NCI seeks licensees or co-development partners for this technology, which describes compositions, methods and kits for identifying, characterizing biomolecules expressed in a sample that are associated with the presence, the development, or progression of cancer.

REFERENCE NUMBER

E-025-2009

PRODUCT TYPE

- Diagnostics

KEYWORDS

- AKT pathway, diagnostic, prognostic, extrahepatic cholangiocarcinoma

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

The AKT pathway plays a key role in the regulation of cellular survival, apoptosis, and protein translation and has been shown to have prognostic significance in a number of cancers. Recently, the inventors have identified several functions of the AKT pathway in certain cancers, such as extrahepatic cholangiocarcinoma (EHCC).

The NCI seeks partners to license or co-develop this technology, which describes compositions, methods and kits for identifying, characterizing biomolecules expressed in a sample that are associated with the presence, the development, or progression of cancer. Utilizing multiplex tissue immunoblotting, the inventors have demonstrated that PTEN expression, PTEN/p-AKT ratios, and PTEN/p-mTOR ratios can predict the survival of cancer patients. These biomarkers may provide useful diagnostic information for cancer patients as well as identify patients appropriate for mTOR analog-based chemotherapy or agents directed against AKT.

POTENTIAL COMMERCIAL APPLICATIONS

- Diagnostic and Prognostic tool to detect the presence of cancer and predict the relative cancer survival rate for a subject with cancer.
- Method of identifying patients appropriate for therapies targeted to the AKT pathway.
- A kit for detecting cancer associated proteins in a sample.

INVENTOR(S)

Stephen M. Hewitt and Joon-Yong Chung (NCI)

DEVELOPMENT STAGE

- Prototype

PUBLICATIONS

JY Chung et al. The expression of phospho-AKT, phospho-mTOR, and PTEN in extrahepatic cholangiocarcinoma. Clin Cancer Res. 2009 Jan 15;15(2):660-667.

PATENT STATUS

- **U.S. Provisional:** U.S. Provisional Application No. 61/114,501 filed January 14, 2009

THERAPEUTIC AREA

- Cancer/Neoplasm